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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,872	06/26/2003	Richard Hunter Harris	RPS920020124US1	7859

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EXAMINER	
WALSH, DANIEL I	

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,872	HARRIS ET AL.	
	Examiner	Art Unit	
	Daniel I Walsh	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 July 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Receipt is acknowledged of the Amendment received on 15 July 2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-2, 8, 16, 20, 23, 24, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hertz et al., as cited in the previous Office Action, further in view of He (US 2004/0118916).

Re claim 1, Hertz et al. teaches a reader configured to read a coded identifier associated with the item (barcode reading software 22); a capture module to capture a visual characteristic of the item (camera 14); and a verification module configured to verify that a candidate item is

associated with the coded identifier (see abstract).

Re claims 2, 16, 24, and 27, Hertz et al. teaches an association module configured to associated the visual characteristic with a candidate item in a database (see claim 2).

Re claims 8 and 23, Hertz et al. teaches the visual characteristic is selected from color, size, shape, or texture (col 5, lines 35+).

Re claim 20, Hertz et al. teaches the database is configured to associate the visual characteristic with the coded identifier (barcode) by obtaining feature data of the article identified by the read article code from the database and compares it to the extracted feature data (col 6, lines 60+).

Hertz et al. is silent to the visual characteristic being capture independent of the reading of the coded identifier, as it is captured in one image/step.

He et al. teaches separate operations of reading and capturing through separate image engines (paragraph [0070]+ in the case of barcodes, and (abstract) in the case of RFID tags). Further, He et al. teaches many ways to validate different image data, including different sides of objects, for example (paragraph [0052]+).

Therefore, at the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Hertz et al. with those of He et al.

One would have been motivated to do this in order to reads object data that is remote from the reader (not in line of sight) and verify such data through image comparison, thus leading to convenience plus accuracy (in the case of RFID tags, interpreted as coded identifiers). In the case of barcodes, for example, one would have been motivated to do this to provide separate imaging for the barcode and the object bearing the barcode, so that the barcode can be

focused on to be reliably be read, whereas in a single imaging operation it is more difficult to focus on two different things (object and barcode) in the same image. Accordingly, by separately imaging the code and the object, more accurate data can be obtained. Further, the Examiner notes that simply reducing into two steps what is typically performed in one step is well within the skill in the art.

3. Claims 3, 4, 9-11, 17, 18, 25, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hertz et al./He, as applied to claims 1, 16, 24, 27 above, further in view of Jennings et al. (US 6,592,033).

The teachings of Hertz et al./He have been discussed above. Re claim 11, Hertz et al. teaches a notification module configured to notify a user whether the candidate item is associated with the coded identifier of the item where Hertz et al. teaches comparing barcode estimate 106 to features stored in database 30 (candidate items) to determine if the barcode is associated with the candidate, and if so, positive notification is obtained through completion of the transaction, or an error message is displayed if the coded identifier is not associated with the candidate item (see col 7, lines 1+). Though Hertz et al. is silent to notification of success, it is understood and conventional in the art that upon successful identification of an item at a POS terminal/transaction completed, that it is conventional to display the transaction data on a display, generate a bill, notify the user, as is obvious in the art.

Re claim 9, though Hertz et al. teaches reading a coded identifier, capturing a visual characteristic, etc., Hertz et al. is silent to calling such means a module, but the Examiner interprets the processor 12 as an input module that reads a coded identifier and captures a visual characteristic (by executing software). Further, the Examiner notes that at the time the invention

was made, it was well known and conventional to use controllers in electronic systems to communicate data, and therefore such modification is obvious. Further, the use of a module that reads coded data and captures a visual characteristic were well known and conventional, and an obvious expedient, versus separate modules.

Re claim 9, Hertz et al./He is silent to a confirmation module in communication with the controller, the confirmation module configured to confirm that the candidate item is associated with the item. As discussed above, it is obvious to use a controller to communicate information within a system. Re claims 3, 4, 10, 17, 18, 25, 28, 29, Hertz et al./He is silent to presenting a plurality of candidate items associated with the visual characteristic and allowing the user to identify the candidate item corresponding to the item and confirm that the candidate and item/code are associated (presentation module).

Jennings et al. teaches a presentation module to present a plurality of candidate items associated with the visual characteristic of the item and allowing the user to identify from the candidate item corresponding to the item through "In use (see FIG. 6), the item 11 to be identified is placed on viewplate 10, which automatically triggers the image capture, processing, analysis and recognition steps as well as, if appropriate, a weight-value capture step. The resulting candidate list generated is then displayed on display 23. The customer or checkout operator then visually verifies the correct match presented from those displayed, and may have the operation of scrolling through pages of further candidates if the correct result is not found on the first page" (col 7, lines 45+, and see abstract).

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Hertz et al./He with those of Jennings et al.

One would have been motivated to do this to allow selection of a candidate item if there are several possibilities of matching, in order to ensure accuracy. Further, one would have been motivated to do this in order to use well known controller means to communicate data to confirm association of a candidate item with an item, and to notify a user, as is conventional in the art, a completed transaction, or in the case of an error, notifying a user so that the problem can be addressed. Further, the examiner notes that it is well known and conventional to ensure that a barcode read and the item it is read from correspond, in order to ensure accurate product identification and lowering scan errors (see Tsikos et al. paragraph [1333]+).

4. Claims 5, 19, 26, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hertz et al./He, as applied to claims 1, 16, 24, 27 above.

Hertz et al./He teaches notifying/a notification module configured to notify a user whether the candidate item is associated with the coded identifier of the item as Hertz et al. teaches comparing barcode estimate 106 to features stored in database 30 (candidate items) to determine if the barcode is associated with the candidate, and if so, positive notification is obtained through completion of the transaction, which is understood to include a notification of success (notification), as is conventional in the art, or an error message is displayed if the coded identifier is not associated with the candidate item ((see col 7, lines 1+).

5. Claims 6 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hertz et al./He, as applied to claims 1 and 16 above, further in view of Tsikos et al. (US 2003/0189098).

Re claims 6 and 21, the teachings of Hertz et al./He have been discussed above. Re claim 21, Hertz et al. teaches the use of magnetic, spectral, and sonar sensors to generate more physical attributes of the item (col 4, lines 48+). This is interpreted to include generating a visual

signature generating a visual signature from its visual characteristic. Accordingly, it is well known and conventional to use visual signatures as a means to distinguish objects, items, as is well known and conventional in the art.

Hertz et al./He is silent to the database associating the visual characteristic with the candidate item and the coded identifier.

Tsikos et al. teaches the database associating the visual characteristic with the candidate item and the coded identifier (paragraph [1333]+).

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Hertz et al. with those of Tsikos et al.

One would have been motivated to do this in order to increase the accuracy of production identification to lower scan rates and improve speed, and to also to create more subsets of databases to further and more accurately differentiate items. Further, the Examiner notes that He teaches comparing the visual characteristic obtained with the candidate item and coded identifier (abstract, in the case of RFID tags, and it is obvious that such means can be used to include barcodes as well).

6. Claims 7 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hertz et al./He, as applied to claims 1 and 22 above, further in view of Novak (US 5,497,314).

Re claims 7 and 22, the teachings of Hertz et al./He have been discussed above. Though Hertz et al. teaches that features include shape, size, and color scheme of the item packaging (col 5, lines 33+), Hertz et al. is silent to a weight module configured to identify and associate the weight of the item with the weight of a candidate item.

Novak teaches the use of a weight module to identify and associate the weight of the

item with the candidate item (col 4, lines 36+).

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Hertz et al./He with those of Novak.

One would have been motivated to do this to create a more reliable means to verify an item as a candidate item, and to ease and simplify database searching/filtering by applying further parameters to narrow down the verification.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hertz et al./He in view of Novak.

The teachings of Hertz et al./He have been discussed above. Though Hertz et al. teaches that features include shape, size, and color scheme of the item packaging (col 5, lines 33+), Hertz et al. is silent to a weight module configured to identify and associate the weight of the item with the weight of a candidate item.

Novak teaches the use of a weight module to identify and associate the weight of the item with the candidate item (col 4, lines 36+).

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Hertz et al./He with those of Novak.

One would have been motivated to do this to create a more reliable means to verify an item as a candidate item, and to ease and simplify database searching/filtering by applying further parameters to narrow down the verification.

8. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hertz et al./He in view of Seevers et al. (US 6,260,023).

The teachings of Hertz et al./He have been discussed above.

Hertz et al. teaches a terminal system 16 including, including a reader to read a coded identifier and a capture module, and associating the visual characteristic with a candidate item and verifying the item is the candidate item, as discussed above.

Hertz et al./He is silent to a server in communication with the checkout station, the server comprising an association module configured to associate the visual characteristic with a candidate in an item database, and a verification module configured to identify that the candidate item is associated with the coded identifier.

Seevers et al. teaches a server 16 remote to the checkout station to communicate with a plurality of checkouts. The server executes recognition software to obtain data from the data collector via the computer and network, and identifies items by comparing produce data in produce data 42 with collected produce data and retrieves the corresponding item identification information to forward the information to the control circuitry for checkout (col 4, lines 25+).

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Hertz et al./He with those of Seevers et al.

One would have been motivated to do this to have a server in communication with the checkout station to verify items, since having a server to recognize items and send product information is well know and conventional in the art, and is desirable since it can be easily added to the recognition network of the existing store network.

Response to Arguments

9. In response to the Applicants argument that the prior art fails to teach independent capturing of the visual characteristic and reading of the coded identifier, the Examiner has cited

the prior art of He (US 2004/0118916). Accordingly, the amendments have necessitated new grounds of rejection, and this action is made final.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Entwistle (US 2002/0088860), He (US 2004/0118920), Wevelsiep et al. (US 4,514,622), Ehrhart et al. (US 2004/0155110), Patel (US 2004/0129783), and Culp et al. (US 2003/0059088).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Walsh whose telephone number is (571) 272-2409. The

examiner can normally be reached between the hours of 7:30am to 4:00pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone numbers for this Group is (703) 308-7722, (703) 308-7724, or (703) 308-7382.

Communications via Internet e-mail regarding this application, other than those under 35 US.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to **[daniel.walsh@uspto.gov]**.

> All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set for the in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

KARL D. FRECH
PRIMARY EXAMINER

DW
9/15/04